

I claim:

1. An adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive, wherein a digital signal processor is provided, said digital signal processor being capable of building a radio frequency ripple signal central level according to a radio frequency ripple signal, said method comprising the steps of:
 - 5 determining whether the digital signal processor is under tracking control; and
 - performing a low-pass filtering operation on said radio frequency ripple signal to generate said radio frequency ripple signal central level.
2. The adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 1, further comprising the step of:
 - 10 inputting said radio frequency ripple signal to a first low-pass filter when the digital signal processor is under tracking control.
3. The adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 2, wherein said first low-pass filter is a one-stage low-pass filter.
 - 15
4. The adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 3, wherein said one-stage low-pass filter has a lower bandwidth.
 - 20
5. The adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 1, further comprising the step of:
 - 25 inputting said radio frequency ripple signal to a second low-pass filter when the digital signal processor is not under tracking control.
6. The adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 5, wherein said second low-pass filter is a one-stage low-pass filter.
 - 30

7. The adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 6, wherein said one-stage low-pass filter has a higher bandwidth.

8. The adaptive level-cutting method of a radio frequency ripple signal for a
5 CD-ROM drive as claimed in claim 5, further comprising the steps of:

renewing the initial state of said second low-pass filter;
storing the end state of said second low-pass filter.

9. The adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 5, further comprising the steps of:

10 providing a set speed; and

renewing said radio frequency ripple signal central level according to a semi-track flag signal when a speed is lower than the set speed or renewing said radio frequency ripple signal central level according to a sampling frequency of said low-pass filter when the speed is higher than the set speed.

15 10. The adaptive level-cutting method of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 1, further comprising the step of:

inputting said radio frequency ripple signal and said radio frequency ripple signal central level to a comparator and then outputting a radio frequency zero cross signal from said comparator.

20 11. An adaptive level cutting device of a radio frequency ripple signal for a CD-ROM drive for building a radio frequency ripple signal central level according to a radio frequency ripple signal, said device comprising:

an analog-to-digital converter for sampling said radio frequency ripple signal;
a digital signal processor connected to said analog-to-digital converter; and

25 a digital-to-analog converter connected to said digital signal processor and for

outputting said radio frequency ripple signal central level.

12. The adaptive level cutting device of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 11, wherein said digital signal processor comprises a first low-pass filter used under tracking control and a second low-pass filter used under non-tracking control.

5 13. The adaptive level cutting device of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 12, wherein said first low-pass filter is a one-stage low-pass filter.

10 14. The adaptive level cutting device of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 13, wherein said one-stage low-pass filter has a lower bandwidth.

15 15. The adaptive level cutting device of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 12, wherein said second low-pass filter is a one-stage low-pass filter.

15 16. The adaptive level cutting device of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 15, wherein said one-stage low-pass filter has a higher bandwidth.

17. The adaptive level cutting device of a radio frequency ripple signal for a CD-ROM drive as claimed in claim 11, further comprising a comparator, said radio frequency ripple signal and said radio frequency ripple signal central level being input to said comparator, said comparator then outputting a radio frequency zero cross signal.